

REMARKS

The Examiner has indicated that claims 2-8 would be allowable if rewritten in independent form. Applicant has amended the claims to place them in condition for allowance.

Claim 1 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hooley et al. in view of Sawabei. The Examiner takes the position that Hooley et al. discloses all of the features of the claimed invention with the exception of teaching a beam setting portion that sets the sweep angles of the selected plurality of peaks as beam output angles which are angles to output audio beams of channels. The Examiner states that Sawabei discloses this feature at paragraphs 0043-0048, and that it would be obvious to modify the system of Hooley et al. in view of Sawabei to arrive at the claimed invention. Applicant respectfully traverses the rejection.

Hooley et al. discloses a system for automatically setting-up an array type speaker system. As in the present invention, Hooley et al. samples audio signals using a microphone. It seems that Hooley et al., however, is primarily directed to utilizing the array speaker as a form of SONAR to map out the room structure. Several processes for analyzing the received signals are disclosed in order to generate the room map, none of which correspond to the claimed beam setting portion.

Sawamura shows that the beam control portion 12 control a direction and a level of the beam of audio sources in channels. However, Sawamura does not disclose setting the beam output angles of the sound beams using the sound beam based on the test sound signal. Accordingly, Sawamura fails to overcome the deficiencies of Hooley et al. Thus, even if the references could be combined, the combination of references would not render the claimed invention prima facie obvious to one of ordinary skill in the art.

Applicant has amended claim 1 to further clarify the claim language. Claim 1 now states that the storage portion stores a signal level of the test sound collected by the microphone and sweep angles of the audio beams when the audio beams corresponding to the test sounds are output from the speaker array therein so as to correlate with each other. Hooley et al. fails to disclose or suggest this feature.

The paragraphs noted by the Examiner in Hooley et al. state that the signal processor can determine the time that has elapsed between emitting the pulse and receiving the first diffuse reflection at the microphone 120. The signal processor can also determine the amplitude of the received reflection and compare it to the transmitted pulse. As the beam 130 is

scanned across the wall 160, the changes in time of receiving the first reflection and amplitude can be used to calculate the shape of wall 160. The wall shapes are calculated in room data output block 1030 shown in Fig. 3. In Hooley et al., the elapsed time is correlated to the amplitude of the received reflection, however, there is no disclosure of the "sweep angles of the audio beams" as recited in claim 1. Thus, contrary to the Examiner's assertions, Hooley et al. does not show all the features of the claimed invention but for the beam control portion.

In view of above, all of the claims in this case are believed to be in condition for allowance, notice of which is respectfully urged.

Respectfully submitted,

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